



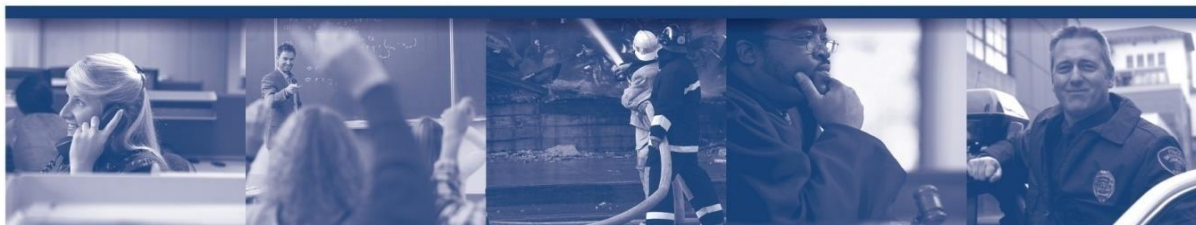
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Omaha School Employees' Retirement System January 1, 2020 Valuation Results

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Purposes of an Actuarial Valuation

- Measure assets and liabilities at single date
- Evaluate funding progress and the sufficiency of statutory fixed contribution rates. Determine any additional District funding requirements.
- Analyze experience (actual vs. expected) in last year
- Assess and disclose risks associated with funding the System
- Report on trends in assets, liabilities and contributions



OSERS Funding

- Members contribute 9.78% of pay
- State of Nebraska contributes 2.00% of pay
- Nebraska statutes provide that the School District shall contribute the greater of:
 - 101% of the contributions made by members or
 - Amount necessary to maintain the solvency of the System, as determined annually by the Board upon recommendation of the Actuary and Trustees
 - Actuarial contribution rate (normal cost + UAAL payment) is used to determine the contribution necessary to maintain the solvency of the system



Actuarial Valuation

- Snapshot picture of the system as of a single date (January 1, 2020)
- No change in assumptions, methods or benefit structure
- Statistical projection of the timing and amount of all future benefits to be paid
 - Uses one set (best estimate) of many assumption sets that could be considered reasonable
 - Variations are to be expected from year to year as assumptions are long-term in nature
- Evaluation of funding progress and sufficiency of scheduled contributions. Calculation of any additional District contribution for the year.

Calendar Year 2019 Actual Experience



- Return of 13.8% on market value of assets. Return on actuarial value was 5.2% which resulted in an actuarial loss of \$31 million
- Small net actuarial loss on liabilities of \$1.5 million
- Additional District contribution was \$21.3 million, higher than actuarial contribution of \$18.2 million
- Unfunded actuarial accrued liability increased from \$814M to \$848M
- Funded ratio held steady at 63% (market value increased from 54% to 58%)



Active Membership

	1/1/2020	1/1/2019	% Change
Certificated			
- Tier 1	2,823	3,021	(6.6)
- Tier 2	778	842	(7.6)
- Tier 3	584	633	(7.7)
- Tier 4	<u>670</u>	<u>233</u>	187.6
- Total	4,855	4,729	2.7
Classified			
- Tier 1	1,183	1,363	(13.2)
- Tier 2	435	504	(13.7)
- Tier 3	304	414	(26.6)
-Tier 4	<u>589</u>	<u>167</u>	252.7
- Total	2,511	2,448	2.6
Total Actives	7,366	7,177	2.6

Tier 1: became a Member before July 1, 2013

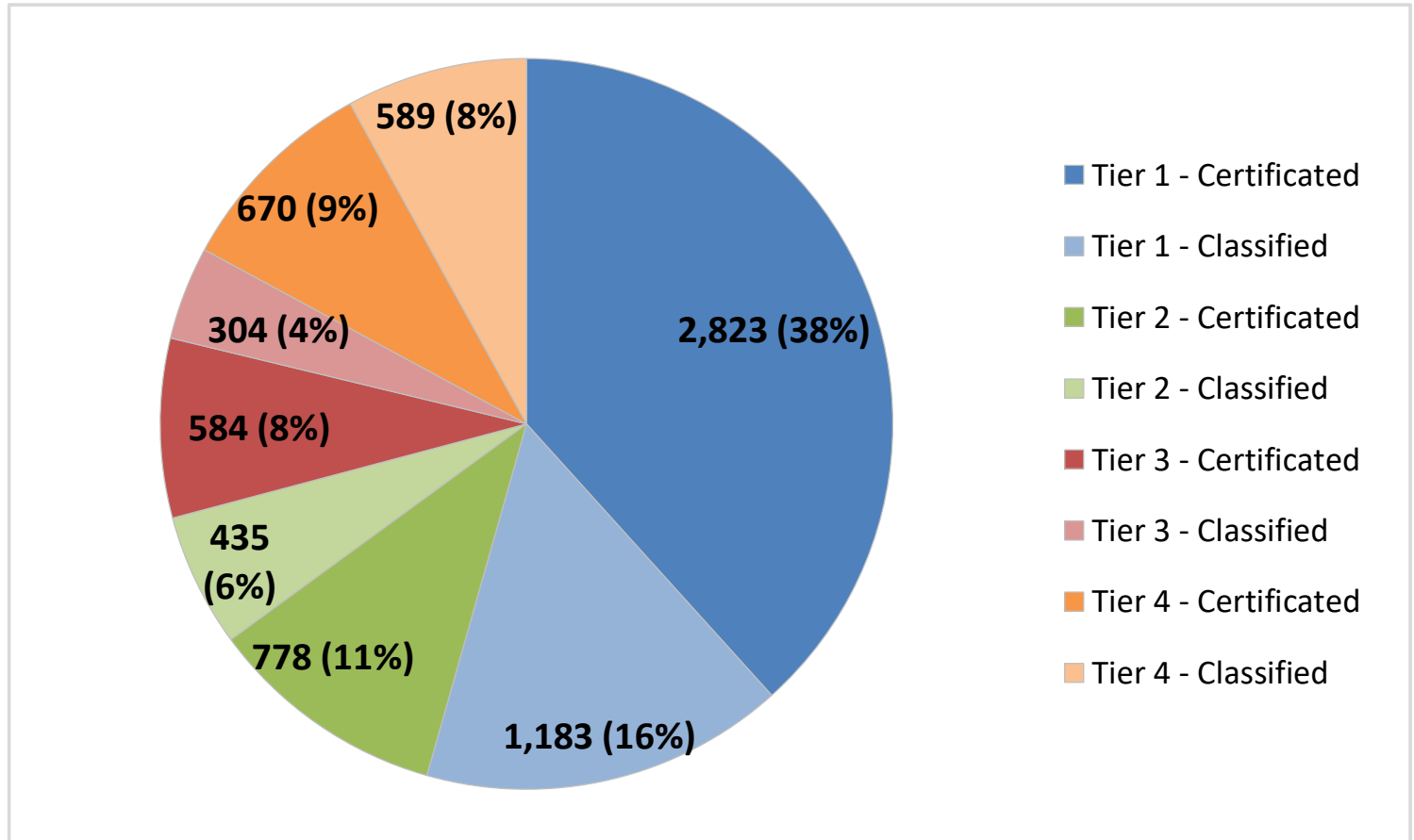
Tier 2: became a Member on/after July 1, 2013 and before July 1, 2016

Tier 3: became a Member on/after July 1, 2016 and before July 1, 2018

Tier 4: became a Member on/after July 1, 2018



Active Members By Tier





Total Membership – OSERS

	January 1, 2020	January 1, 2019	% Change
Actives			
- Certificated	4,855	4,729	2.7
- Classified	<u>2,511</u>	<u>2,448</u>	2.6
- Total Actives	7,366	7,177	2.6
Retirees and Disabled Members	4,711	4,570	3.1
Beneficiaries	269	256	5.1
Inactive Vested Members	1,163	1,114	4.4
Inactive Non-Vesteds	<u>709</u>	<u>671</u>	5.7
Total	14,218	13,788	3.1



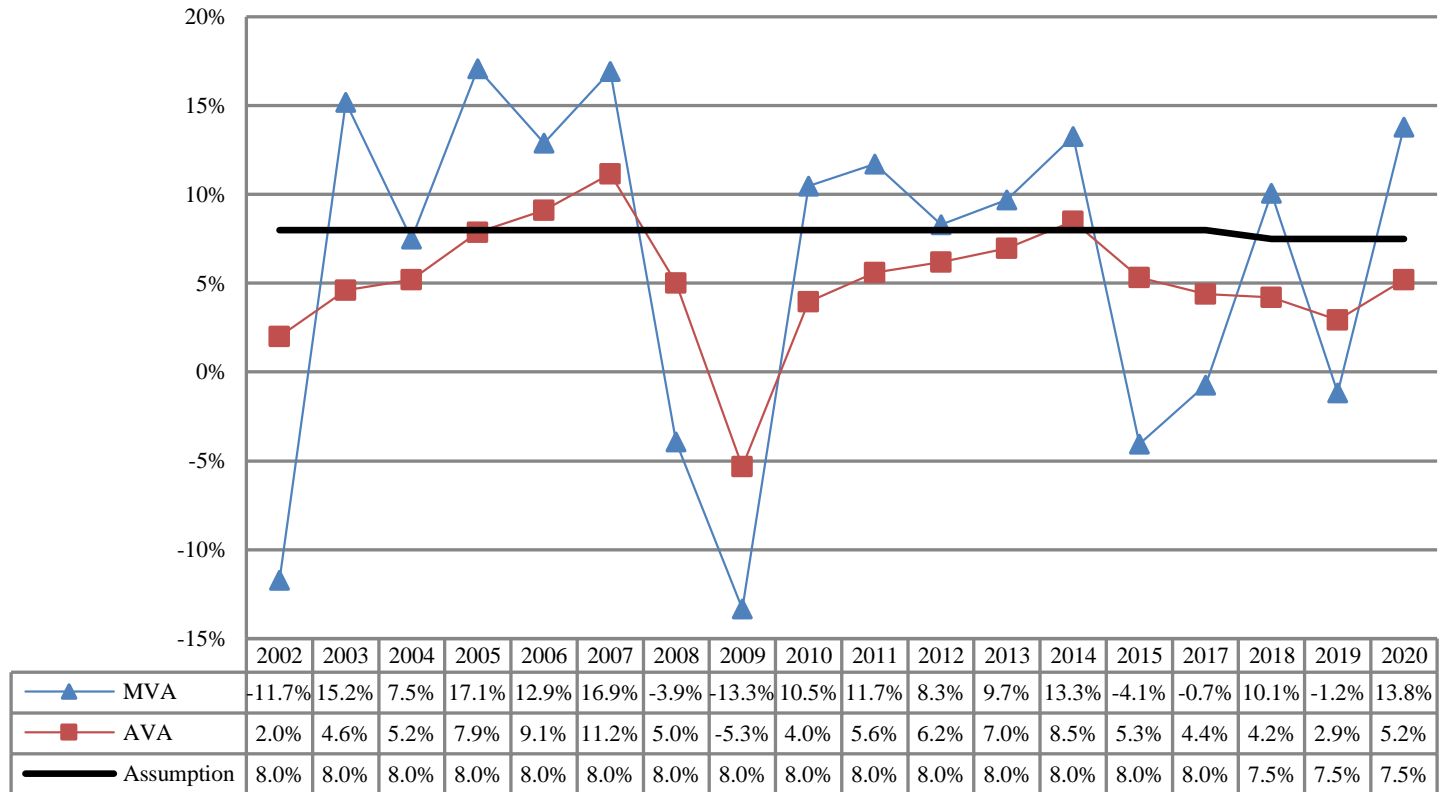
Actuarial Value of Assets

- Market value is not used directly in the valuation due to volatility in market returns
 - Smoothing method allows the ups and downs in market returns to average out over time
 - Helps create stability and predictability in the District's contribution rate

- Current method = Expected asset value (based on assumed return) + 25% of the difference between actual market value and expected asset value
 - Equivalent to 75% of Expected Value + 25% Market Value



Market vs Actuarial Rate of Return





System Assets

(\$ in millions)

	Market	Actuarial
Assets, 1/1/19	\$ 1,194	\$ 1,379
Adjustment for late reporting	(1)	(0)
▪ Contributions	103	103
▪ Benefit Payments	(134)	(134)
▪ Administrative Expenses	(1)	(1)
▪ Investment Income	<u>163</u>	<u>71</u>
Assets, 1/1/20	\$ 1,324	\$ 1,418
Rate of Return	13.8%	5.2%

Unrecognized investment loss at 1/1/20 is \$94 million.



Funded Status

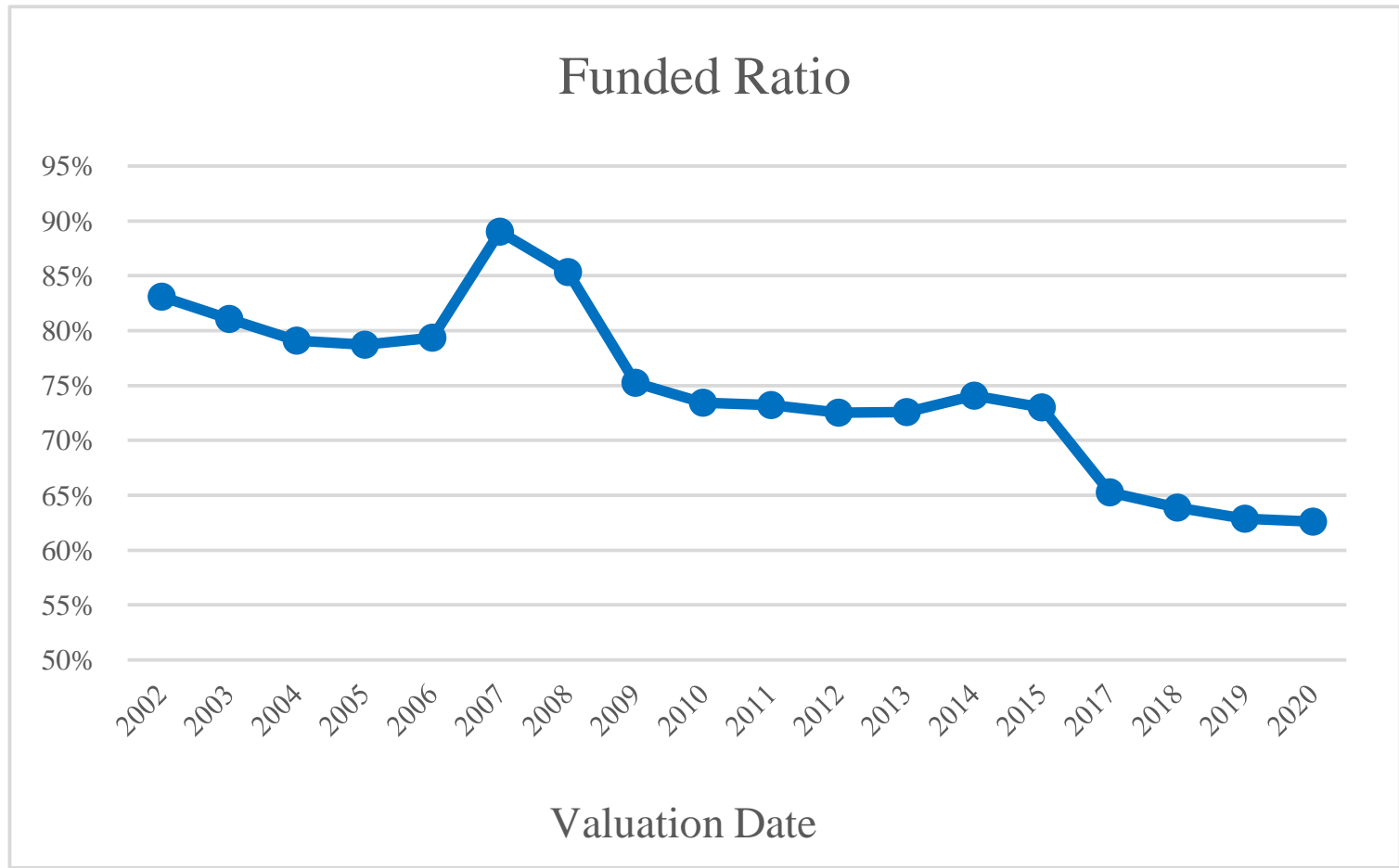
(\$ in millions)

	January 1, 2020	January 1, 2019
Actuarial Accrued Liability (AAL)	\$ 2,266	\$ 2,193
Actuarial Value of Assets (AVA)	<u>1,418</u>	<u>1,379</u>
Unfunded Actuarial Accrued Liability	\$ 848	\$ 814
Funded Ratio: Actuarial Assets/AAL	63%	63%
Funded Ratio: Market Value/AAL	58%	54%

Numbers may not add due to rounding



Historical Funded Ratio



The increase in 2007 reflects resetting actuarial value to market value. The decline from 2007 to 2012 reflects the impact of the Great Recession and the decrease in 2017 is due to the change in assumptions, which included lowering the investment return assumption from 8.0% to 7.5%.



Change in UAAL

(\$ in millions)

UAAL, 1/1/2019	\$ 814
▪ Expected increase from amortization method	12
▪ Contributions more than actuarial rate	(3)
▪ Investment experience	31
▪ Liability experience	2
▪ Other experience	(8)
UAAL, 1/1/2020	\$ 848

UAAL = Unfunded Actuarial Accrued Liability



Actuarial Contribution Rate

- Normal cost – ongoing cost for active members

- UAAL Payment – payment to fund the UAAL based on the Board of Trustees’ funding policy
 - Level percent of payroll (increasing dollars)
 - “Layered” approach
 - Legacy UAAL was reset to January 1, 2019 UAAL and amortized over a closed 30-year period
 - New UAAL bases are amortized over a new closed 30-year period commencing on the respective valuation date

Additional District Contribution

(\$ in millions)



	1/1/2020	1/1/2019
Actuarial Contribution Rate		
• Normal Cost	12.88%	12.96%
• Amortization of UAAL	<u>14.37%</u>	<u>14.01%</u>
• Total Contribution Rate	27.25%	26.97%
Statutory Member Rate	(9.78%)	(9.78%)
Statutory Employer Rate (101% of member rate)	(9.88%)	(9.88%)
Statutory State Rate	(2.00%)	(2.00%)
Additional Required District Contribution		
• Contribution Shortfall/(Margin)	5.59%	5.31%
• Projected Pay for Plan Year	\$ 350	\$ 340
• Additional Required District Contribution	\$ 19.8	\$ 18.2

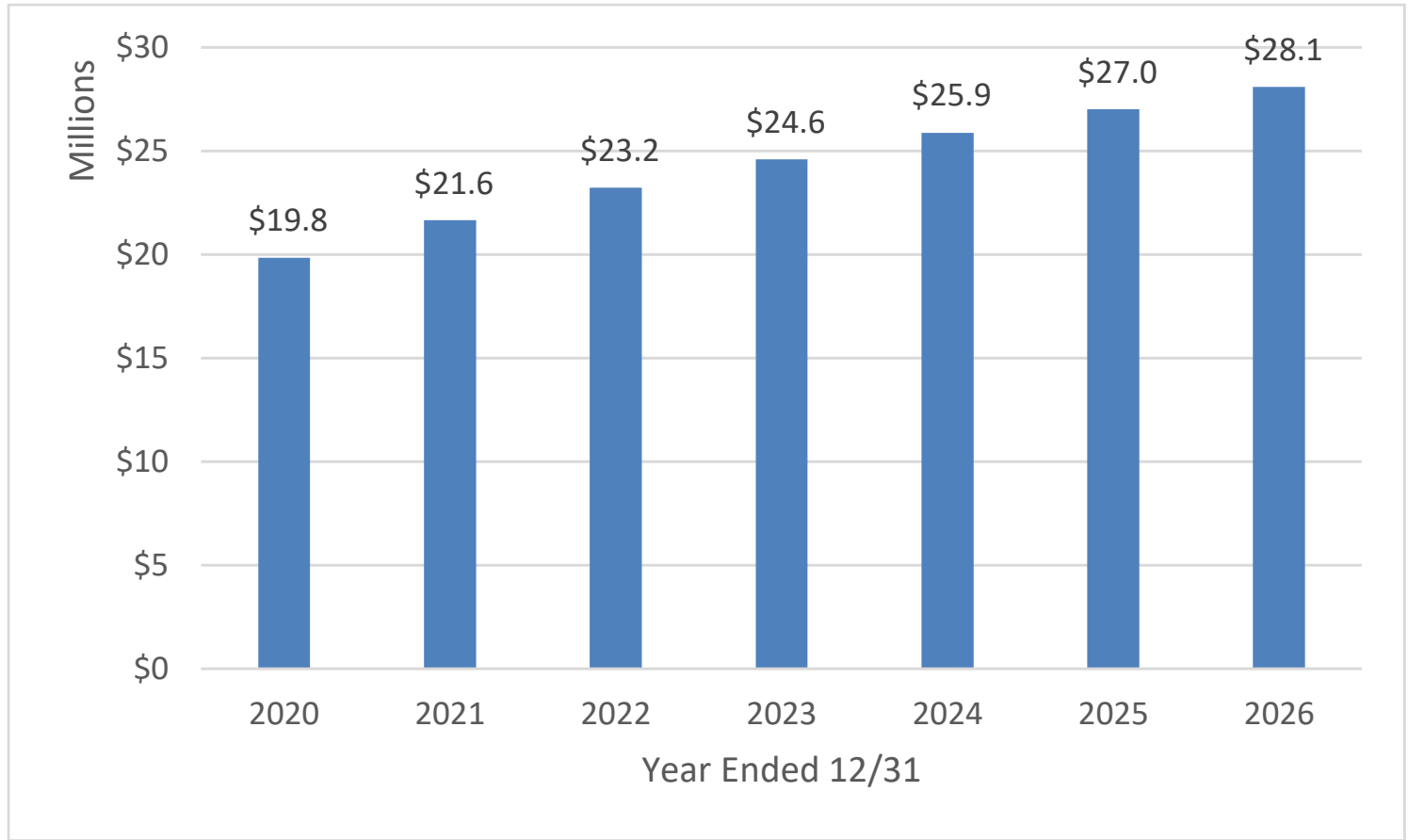


Change in the Actuarial Required Contribution

Total Contribution Rate as of 1/1/2019	26.97%
▪ Contributions different than actuarial rate	(0.05%)
▪ Investment experience	0.52%
▪ Liability experience	0.03%
▪ Change in normal cost rate	(0.08%)
▪ Payroll growth different than expected	0.00%
▪ Other experience	<u>(0.14%)</u>
Total Contribution Rate as of 1/1/2020	27.25%

Projected Additional District Contribution

(If All Assumptions Are Met)



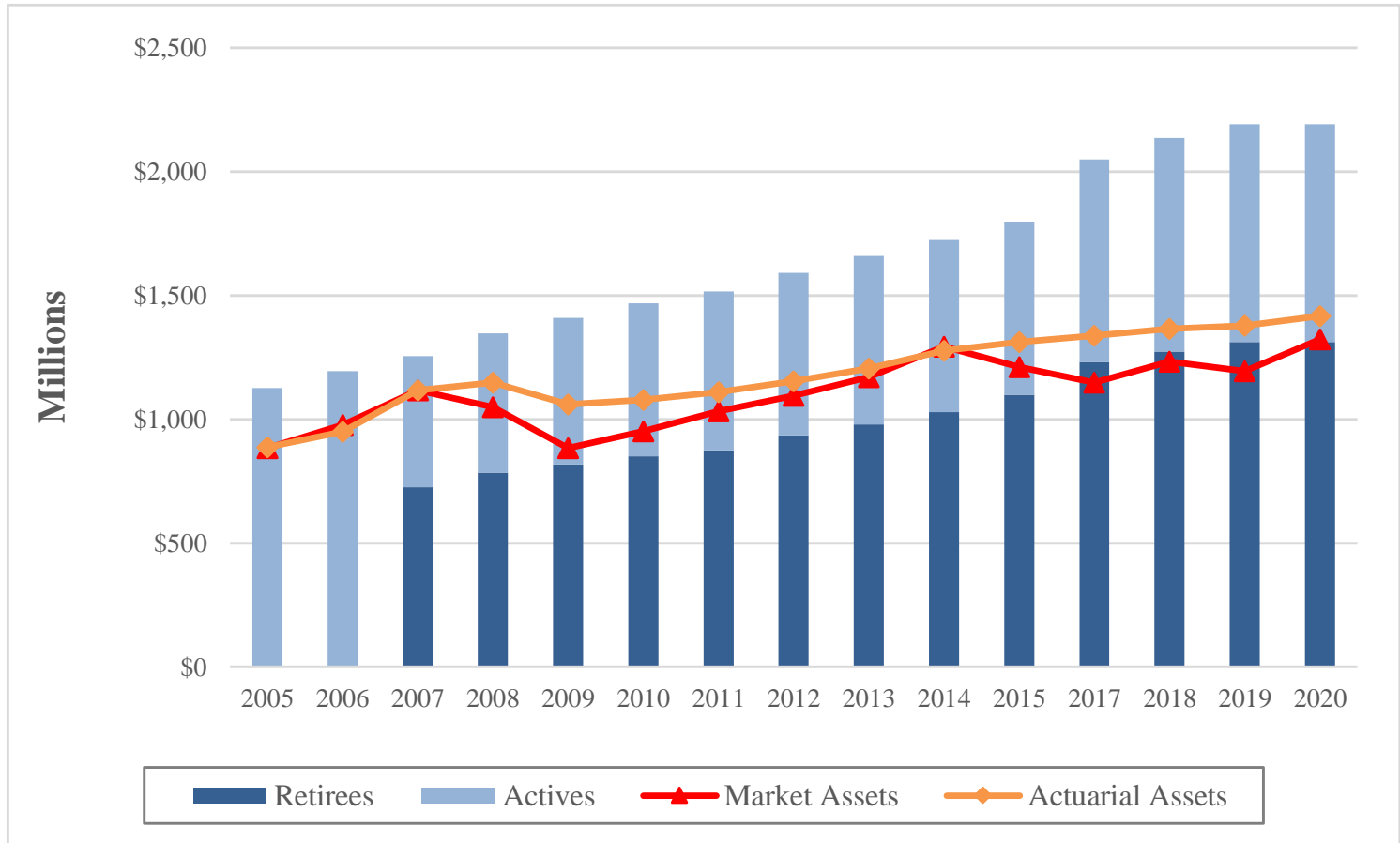


ASOP 51: Maturity Measurements

- OSERS is a very mature System
 - The more mature the system, the more sensitive it is to investment volatility, i.e., harder to recover from investment losses with increased contributions (higher contribution rates)
 - Significant differences between actual and expected returns, which are not unexpected given the standard deviation of the portfolio, have a large impact on contribution amounts. Variations flow directly through to the additional District contribution amount, resulting in high volatility of that amount.



Historical Assets versus Liabilities



The lines compare the market and actuarial value of assets to the retiree portion of the total actuarial accrued liability



Measure of Contribution Rate Volatility

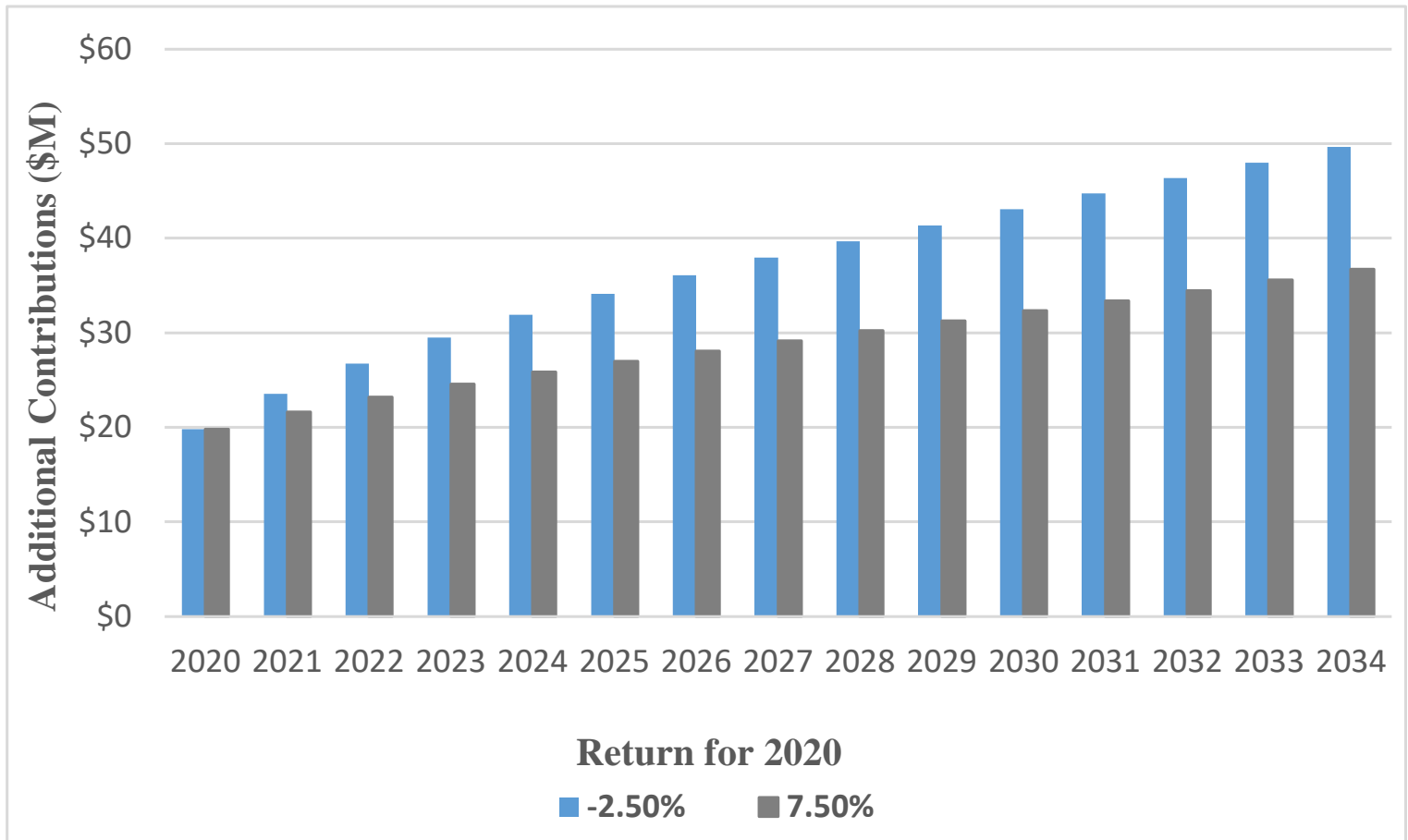
- Asset Volatility Ratio is market value of assets divided by covered payroll

Year	Assets	Payroll	Ratio
2020	\$1,324 M	\$364.8 M	3.63

- Any shortfall in investment return has to be recouped via higher contributions
 - Assets are more than 3.5 times payroll so a return of -2.50% (underperforming the investment return assumption by 10%) generates a loss of \$132 million (36% of payroll)
 - Resulting increase in the actuarial contribution is 2.12% of payroll (without smoothing)
 - The impact of this experience is directly reflected in the additional District contribution amount (see next slide)



Additional District Contribution Under Different Return Scenarios



Projections assume that the 7.5% assumed return is met in all years other than 2020.

Impact of Alternate Investment Return Assumptions



Valuation Results at	7.00%	7.25%	7.50%
Actuarial contribution rate	30.27%	28.73%	27.25%
Statutory contribution rate	21.66%	21.66%	21.66%
Contribution Shortfall	8.61%	7.07%	5.59%
Additional District Contribution	\$30.5M	\$25.1M	\$19.8M
UAAL	\$984M	\$914M	\$848M
Funded Ratio	59%	61%	63%



Comments

- Funded status held steady
 - Actuarial loss on smoothed value of assets
 - Small net actuarial loss on liabilities
 - Deferred investment loss still exists

- District shortfall contribution for 2020 is 5.59% (or \$19.8 million), up from 5.31% of payroll (\$18.2M)

- Given funded status and deferred investment experience, additional District contributions are likely in the foreseeable future